

| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit) |                   |                     |                     |  |                     |                     |                     | DATE<br>February 1999 |                     |            |
|---|-------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|-----------------------|---------------------|------------|
| 6 - Management and Support                          |                   |                     |                     | 0604258F Target Systems Development 2459 |                     |                     |                     |                       |                     |            |
| COST (\$ In Thousands)                              | FY 1998<br>Actual | FY 1999<br>Estimate | FY 2000<br>Estimate | FY 2001<br>Estimate                      | FY 2002<br>Estimate | FY 2003<br>Estimate | FY 2004<br>Estimate | FY 2005<br>Estimate   | Cost to<br>Complete | Total Cost |
| 2459 Target Payloads                                | 4,250             | 6,572               | 192                 | 192                                      | 194                 | 195                 | 1,860               | 1,871                 | Continuing          | Continuing |
| Quantity of RDT&E Articles                          | 0                 | 0                   | 0                   | 0  | 0                   | 0                   | 0                   | 0                     | 0                   | 0          |

(U) **A. Mission Description**

Aerial Targets are used to determine air-to-air weapons effectiveness and mission proficiency of our tactical systems against enemy aircraft. The overall objective is to improve air-to-air weapons systems accuracy and reliability by developing improved aerial target systems for Air Force weapons system test and evaluation. The program develops full-scale and subscale aerial targets and target control systems. Specialized target payload subsystems are developed for full-scale and subscale targets for missile scoring, electronic and infrared (IR) countermeasures, and radar and IR signature augmentation. Electronic countermeasures and infrared countermeasures being developed include chaff and flare dispenser systems. The Drone Radio Frequency (RF) Electronic Enhancement Mechanism (DREEM) is being developed to provide subscale radar cross section (RCS) enhancement to replicate full size threat aircraft.

(U) FY 1998 (\$ in Thousands):

- (U) \$1,413 Continued Program Definition and Risk Reduction (PDRR) for DREEM
- (U) \$865 Conducted Vector Doppler Scorer (VDOPS) Airborne Sensor Upgrade
- (U) \$268 Conducted Integrated Flight Controller Hardware in the Loop (IFC HWIL) Autopilot Simulation
- (U) \$122 Conducted DREEM Feasibility Study (Near Field)
- (U) \$32 Conducted Super Subscale Demonstration Gulf Range Drone Control System (GRDCS) Support
- (U) \$137 Completed Integrated Flight Controller (IFC) Advanced Maneuvers GRDCS Integration
- (U) \$67 Completed Electronic Countermeasures Pod Upgrade GRDCS Integration
- (U) \$1,062 Continued Support & Management
- (U) \$284 Conducted DREEM Demonstration Validation Testing
- (U) \$4,250 Total

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| BUDGET ACTIVITY<br><b>6 - Management and Support</b>           | PE NUMBER AND TITLE<br><b>0604258F Target Systems Development</b> |                              |
|  |   | PROJECT<br><b>2459</b>       |

(U) FY 1999 (\$ in Thousands):

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- (U) \$492 Continue Contractor - Support & Management
- (U) \$295 Continue Travel, Training and Second Destination Transportation - Support & Management
- (U) \$232 Continue Management Information Systems, Communications and Assessment - Support & Management
- (U) \$586 Complete DREEM Demonstration Validation Testing
- (U) \$4,818 Army Big Crow program
- (U) \$149 Identified as a source for SBIR
- (U) \$6,572 Total

(U) FY 2000 (\$ in Thousands):

- (U) \$192 Continue Support & Management
- (U) \$192 Total

(U) FY 2001 (\$ in Thousands):

- (U) \$192 Continue Support & Management
- (U) \$192 Total

(U) **B. Budget Activity Justification:**

This program is in budget activity 6 - Management Support because it provides overall support to research and development activities.

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| BUDGET ACTIVITY<br><b>6 - Management and Support</b>  | PE NUMBER AND TITLE<br><b>0604258F Target Systems Development</b> |                |                |                | PROJECT<br><b>2459</b>       |                |                |                |                     |                       |
| <b>(U) C. <u>Program Change Summary (\$ in Thousands)</u></b>   |   |                |                |                |                              |                |                |                |                     |                       |
|   | <u>FY 1998</u>  | <u>FY 1999</u> | <u>FY 2000</u> | <u>FY 2001</u> | <u>Total<br/>Cost</u>        |                |                |                |                     |                       |
| (U) Previous President's Budget (FY 1999 PB)  | 4,491   | 1,666          | 195            | 196            | Cont                         |                |                |                |                     |                       |
| (U) Appropriated Value  | 4,780   | 6,666          |                |                |                              |                |                |                |                     |                       |
| (U) Adjustments to Appropriated Value   |   |                |                |                |                              |                |                |                |                     |                       |
| a. Cong Reductions  | -228  | -94            |                |                |                              |                |                |                |                     |                       |
| b. SBIR   | -62   |                |                |                |                              |                |                |                |                     |                       |
| c. Omnibus or Other Above Threshold Reprogram   | -30   |                |                |                |                              |                |                |                |                     |                       |
| d. Below Threshold Reprogramming  | -210  |                |                |                |                              |                |                |                |                     |                       |
| (U) Adjustments to Budget Years Since FY 1999 PB  |   |                | -3             | -4             |                              |                |                |                |                     |                       |
| (U) Current Budget Submit/ FY 2000 PB   | 4,250   | 6,572          | 192            | 192            | Cont                         |                |                |                |                     |                       |
| (U) Significant Program Changes:<br>FY99 Congressional action increased \$5M for the Army Big Crow program. Big Crow program did not have a program element (PE) number. Air Force Target Systems Development PE used. FY99 funds to go to the Army for Big Crow test support aircraft.<br>FY99 \$149 identified as a source for SBIR |   |                |                |                |                              |                |                |                |                     |                       |
| <b>(U) D. <u>Other Program Funding Summary (\$ in Thousands)</u></b>  |   |                |                |                |                              |                |                |                |                     |                       |
|   | <u>FY 1998</u>  | <u>FY 1999</u> | <u>FY 2000</u> | <u>FY 2001</u> | <u>FY 2002</u>               | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>To<br/>Compl</u> | <u>Total<br/>Cost</u> |
| (U) PE35116F: Appropriation: Missile Procurement, AF Budget Activity: 14 Program Title: Target Drones   |   |                |                |                |                              |                |                |                |                     |                       |
| WSC MQM107 (MQM-107E)   | 6,665   | 3,821          | 0              | 0              | 0                            | 0              | 0              | 0              | Cont                | Cont                  |
| WSC: M04AQF (QF-4)  | 17,176  | 21,761         | 0              | 0              | 0                            | 0              | 0              | 0              | Cont                | Cont                  |
| Spares: BQM-34, QF-4, MQM-107   | 726   | 2,561          | 0              | 0              | 0                            | 0              | 0              | 0              | Cont                | Cont                  |
| Total   | 24,567  | 28,143         |                |                |                              |                |                |                |                     |                       |
| (U) PE35116F: Appropriation: Aircraft Procurement, AF Budget Activity: 10 Program Title: Target Drones  |   |                |                |                |                              |                |                |                |                     |                       |
| WSC: 10TRGT   | 0   | 0              | 36,152         | 37,448         | 37,727                       | 38,257         | 48,009         | 40,061         | Cont                | Cont                  |
| Spares: 16TRGT  | 0   | 0              | 885            | 604            | 725                          | 968            | 972            | 970            | Cont                | Cont                  |
| Total   |   |                | 37,037         | 38,052         | 38,452                       | 39,225         | 48,981         | 41,031         | Cont                | Cont                  |
| Project 2459  |   |                |                |                |                              |                |                |                |                     |                       |
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|---|---|----------------|---|---|---|---|---|---|---|----------------|---|------------------------------|---|----------------|---|---|
| BUDGET ACTIVITY<br><b>6 - Management and Support</b>  |   |                |   |   |   | PE NUMBER AND TITLE<br><b>0604258F Target Systems Development</b> |   |   |   |                |   | PROJECT<br><b>2459</b>       |   |                |   |   |
| <b>(U) E. <u>Acquisition Strategy:</u></b><br><br>The acquisition strategy is competitive, cost plus contracts. |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
| <b>(U) F. <u>Schedule Profile</u></b>   |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
|   |   | <u>FY 1998</u> |   |   |   | <u>FY 1999</u>  |   |   |   | <u>FY 2000</u> |   |                              |   | <u>FY 2001</u> |   |   |
|   | 1 | 2              | 3 | 4 | 1 | 2   | 3 | 4 | 1 | 2              | 3 | 4                            | 1 | 2              | 3 | 4 |
| <b>(U) Full-Scale Aerial Target Systems</b>   |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
| <b>(U) QF-4</b>   |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
| - First Delivery (Lot 3)  |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
|   |   |                | * |   |   |   |   |   |   |                |   |                              |   |                |   |   |
| - Follow-on QF-4 Production Options   |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
|   |   | *              |   |   |   | X   |   |   |   | X              |   |                              |   | X              |   |   |
| <b>(U) Target Payloads</b>  |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
| <b>(U) DREEM</b>  |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
| - Contract Award 3/96   |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
| - Factory Testing   |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
|   |   | *              |   | * |   |   |   |   |   |                |   |                              |   |                |   |   |
| - Ground Testing  |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
|   |   |                |   | * |   |   |   |   |   |                |   |                              |   |                |   |   |
| - Flight Testing  |   |                |   |   |   |   |   |   |   |                |   |                              |   |                |   |   |
|   |   |                |   |   |   | X   |   |   |   |                |   |                              |   |                |   |   |

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|  |   | PROJECT<br><b>2459</b>       |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>(U) Subscale Aerial Target Systems</p> <p>(U) MQM-107E</p> <p>- First Delivery</p> <p>- IOC</p> <p>(U) Non Developmental Item (NDI)</p> <p>SSAT</p> <p>- RFP</p> <p>- Contract Award</p> <p>- First Delivery</p> <p>- IOC</p> <p>(U) Dual Role SSAT (AFSSAT)</p> <p>- RFP</p> <p>- Contract Award</p> <p>- First Article</p> </div> <div style="width: 50%;"> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> <div style="width: 30%;"></div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> <div style="width: 30%;"></div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%;"></div> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%; text-align: center;">*</div> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> <div style="width: 30%; text-align: center;">X</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> <div style="width: 30%; text-align: center;">X</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%;"></div> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30%;"></div> <div style="width: 30%;"></div> <div style="width: 30%; text-align: center;">X</div> </div> </div> </div> |   |                              |